1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/13/2011 has been entered.

2. Note: As noted in the attached Interview Summary Record, the proposal by the examiner to amend claims 1 and 10 by incorporating the substance of claims 4 and 13 to place the application into condition for allowance has been withdrawn in view of newly discovered prior art. The delay in citation of this art is regretted.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueyoko (US 6,478,054 - newly cited) taken in view of the admitted state of the prior art and Breny (US 5,437,321).

Ueyoko discloses a heavy duty tire including a radial carcass ply layer (6 in fig. 7) reinforced with steel cords (21 - note col. 9, lines 27-35) and a carcass reinforcing layer (19) that can be reinforced with organic cords (col. 9, lines 51-56; claims 11-14) and, although illustrated in fig. 7 as along the inside of the carcass, can alternatively be located along the outside of the carcass (col. 10, lines 50-53). Given that the carcass reinforcing layer is located "along the carcass 6" (col. 9, lines 49-50; fig. 7), an entirety thereof would be in contact with the carcass as claimed. This carcass reinforcing layer

therefore reads on the claimed "shape retaining layer". As to the cord angles, Ueyoko suggests that the cords of the carcass are at 60-90 degrees to the equator, with an example of 90 degrees (Table 2) and the cords of the carcass reinforcing layer (19) are at 70-90 degrees to the equator with an example of "80 to 90 degrees" (Table 2). Given that the exemplary angle for the carcass reinforcing layer in Table 2 is "80 to 90 degrees" as compared to 90 degrees for the carcass, it would seem to be teaching that the cords cross each other. Further, in view of Breny (esp. col. 2, lines 36-49), it is apparent that it is known to be desirable in tire constructions having two adjacent essentially radial plies to provide the cords in each ply in a crossing relationship, this providing the expected advantage of avoiding the cords of one ply from slipping between the cords of the other ply during shaping. To provide the cords of the carcass and carcass reinforcing layer in Ueyoko in a crossing relationship is therefore either taught by Ueyoko (and the exemplary cord angles in Table 2) or in any event would have been obvious in view of Breny. As to the bead cores being axially outside the ends of the shape retaining layer, Ueyoko teaches that the ends of the carcass reinforcing layer extend at least to the maximum width points P1 and may end adjacent and axially inside the beads without turning up around the beads (as illustrated in fig. 7 - note also col. 9, lines 60-67). Ueyoko therefore teaches/renders obvious a tire construction consistent with the claims but does not specifically describe how the tire is formed.

Building a tire carcass band initially as a cylindrical band by wrapping the plies on a cylindrical drum is however a well known and typical tire building process as

exemplified by the admitted state of the prior art in paragraph 2 on pages 1-2 of the specification. To build the Ueyoko tire carcass (with the carcass reinforcing layer) as a cylindrical band would therefore have been obvious in this art. Given that the carcass reinforcing layer (19) can end axially inside the bead core without turning-up around the bead cores, the ordinary artisan would have understood that the bead cores would be positioned in such instance axially outside the ends of the carcass ply (6). The reference to a tire "for a construction vehicle" in the preamble does not distinguish the reference tire/method as it merely defines the intended use of the final product and in any event it is also noted that the Ueyoko tire is a heavy duty tire that can be a truck tire (e.g. col. 3, lines 4-5) which certainly is capable of use on a "construction vehicle." A process as required by claim 1 would therefore have been obvious. Additionally toroidally shaping (which necessarily requires that the ends of the carcass are pulled axially inward) and curing (including without auxiliary shape retaining apparatus) as defined in claim 10 would likewise have been understood as typical and obvious.

As to claims 2 and 11, angle ranges consistent with the claimed range are taught by Ueyoko as already noted. Further, in providing the carcass reinforcing layer (19) terminating axially inside/adjacent the bead core without turning up, the artisan would have found it obvious that the ply have a width slightly smaller than 100% of the space between beads. As to claims 3 and 12, cords of the carcass (6) at substantially 90 degrees are taught as already noted (e.g. Table 2) and additional organic plies can be provided in the form of an organic fiber belt layer (e.g. col. 3, lines 23-26) whose cords would typically be at a lower angle to the equator and thereby cross the cords of the

carcass reinforcing layer (19). As to claims 4 and 13, a small crossing angle of the cords in the carcass and carcass reinforcing layer (6 and 19) well within the claimed range would have been suggested or in any event obvious for the same reasons already detailed above (e.g. note the exemplary angles in Table 2 as well as the already described teachings of Breny). As to claims 5 and 14, again, the relatively low angled and narrower width organic belt would satisfy the claimed requirements for the second shape retaining layer. As to claims 6 and 15, the width of a belt layer relative to the bead spacing in typical tires (including the depicted fig. 7 tire) would reasonably render obvious values within the claimed range for the second shape retaining layer. As to claims 7 and 16, a small crossing angle within the claimed range between the carcass and carcass reinforcing layer is suggested/obvious for the same reasons already noted above. As to the crossing angle of the second shape layer, the angles of the cords of the belt plies (col. 3, lines 28-34; i.e. 50-70 degrees and up to 30 degrees to the equator) would teach angles within the claimed range, it being obvious to select any angle within the disclosed ranges. As to claim 8, a tire would likewise have been obvious for the same reasons advanced with respect to the respective method claims. As to claim 9, the crossed cord ply would help avoid widening of the steel cords in the same manner as in applicant's invention.

5. Claims 1, 8/1, 9 and 10 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over WO 80/00069 to Schmit et al.

WO '069 discloses making a tire by making a carcass layer (207) in cylindrical form followed by wrapping a carcass overlay (220) layer directly on the cylindrical

carcass (esp. figs. 10-11 and page 14, lines 11+), this carcass overlay satisfying the claimed requirements for a shape retaining layer. Further, the carcass can be metal (page 12, lines 36-38 - steel being implicit or certainly obvious typical form for the metal cords) and the carcass overlay cords are organic and cross the carcass cords (pages 13-14; fig. 11). Further, the beads (211, 212) would be beyond the widthwise ends of the carcass overlay. The reference to a tire "for a construction vehicle" in the preamble does not distinguish the reference tire/method as it merely defines the intended use of the final product. A method as required by claim 1 and corresponding tire as required by claim 8 is therefore anticipated or obvious from WO '069. Additionally, toroidally shaping (which necessarily requires that the ends of the carcass are pulled axially inward) and curing (there being no suggestion to use an auxiliary shape retaining apparatus) as defined in claim 10 are suggested (page 14, lines 18-20). As to claim 9, the crossed cord ply would help avoid widening of the steel cords in the same manner as in applicant's invention.

6. Applicant's arguments with respect to the previous rejection have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly cited Ueyoko (US 6,478,064) as well as WO 80/00069.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GEOFFREY L. KNABLE whose telephone number is (571)272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GEOFFREY L KNABLE/
Primary Examiner, Art Unit 1747

G. Knable
August 14, 2011